

Summary

Heat-inducible promoter

The invention relates to nucleic acid molecules comprising a heat-inducible promoter and to expression vectors and host cells containing at least one nucleic acid molecule according to the invention. The present invention further relates to kits and methods for producing one or more proteins using the nucleic acid molecules according to the invention, and to various uses of the same. The object of the invention is to provide a promoter the heat-inducible characteristic of which is as selective as possible, in particular a promoter which is active in yeasts and which is suitable for protein expression at high temperatures. This object is fulfilled by a nucleic acid molecule comprising a heat-inducible promoter and which is selected from the following nucleic acids: (a) a nucleic acid the sequence of which comprises the promoter sequence of a *Hansenula polymorpha* gene coding for a protein with trehalose-6-phosphate synthase activity; (b) a nucleic acid with the sequence indicated in SEQ ID NO:1; (c) a nucleic acid having a sequence which exhibits at least 40% identity over a length of 300 bp with one of the sequences indicated in (a) or (b); (d) a nucleic acid which hybridizes with the complementary strand of one of the nucleic acids indicated in (a), (b) or (c); (e) a derivative of one of the nucleic acids indicated in (a), (b) or (c) obtained by substitution, addition and/or deletion of one or more nucleotides; (f) a fragment of one of the nucleic acids indicated in (a) to (e) which retains the function of the heat-inducible promoter; (g) a combination of several of the nucleic acids indicated in (a) to (f), wherein the sequences of the nucleic acids may be different or the same; or of a nucleic acid molecule having a sequence complementary to the sequence of one of the nucleic acids indicated in (a) to (g).